

I CLAIM:

1. A communications system comprising a control station for transmitting control data, comprising

a plurality of beacons dispersed about a communications zone, at least some of the beacons comprising one or a plurality of light-emitting elements positioned so that each beacon emits light in a plurality of directions, and

at least one submersible craft comprising a plurality of light receiving elements positioned so that the craft receives light from a plurality of directions,

whereby when the submersible craft is in the communications zone the submersible craft is in optical communication with at least one beacon for receiving control data from the at least one beacon.

2. The communications system of claim 1, wherein at least some of the light beacons comprise light receiving elements positioned so that each beacon receives light from a plurality of directions and the at least one submersible craft comprises one or a plurality of light-emitting elements positioned so that the craft emits light in a plurality of directions, whereby when the submersible craft is in the communications zone the submersible craft is in optical communication with at least one beacon for sending data to the at least one beacon for transmission to the control station.

3. The communications system of claim 2, wherein the light beacons comprise substantially spherical light beacons.

4. The communications system of claim 3, wherein the one or a plurality of light elements comprises an elongated light element extending around a body of the light beacon.

5. The communications system of claim 2, wherein the light emitting elements comprise point light sources distributed about a body of the light beacon.

6. The communications system of claim 5, wherein the light emitting elements comprise optical fibres mounted to the body.
7. The communications system of claim 6, wherein at least some of the light beacons comprise multi-faceted bodies.
8. The communications system of claim 2, wherein at least some of the light beacons are anchored to a floor or bed of a body of water.
9. The communications system of claim 2, wherein at least some of the light beacons are suspended in a body of water by a floating object comprising a power source for energizing the light beacons.
10. The communications system of claim 9, wherein the floating object comprises a communications relay for relaying communications signals from the submersible craft to the light beacon to a radio frequency antenna or satellite, and for relaying communications signals from a remote control station to the light beacon via an radio frequency antenna or satellite for controlling the submersible craft.
11. The communications system of claim 9, wherein the light bacons are suspended at different depths.
12. The communications system of claim 2, wherein light signals are emitted by the light beacons at a first frequency and light signals are emitted by the at least one submersible craft at a second frequency that does not interfere with communications at the first frequency.
13. The communications system of claim 2, comprising a plurality of submersible crafts and wherein each submersible comprises a unique address for receiving data from the control station.
14. The communications system of claim 3, comprising a plurality of submersible crafts and wherein each submersible craft transmits a data signal comprises a unique address.
15. A communications method, comprising

- a. converting an electrical data signal into a light signal,
- b. transmitting the light signal in a plurality of directions from a plurality of beacons dispersed about a communications zone to at least one submersible craft comprising a plurality of light receiving elements positioned so that the craft can receive the light signal from a plurality of directions, and
- c. converting the light signal back to an electrical data signal for controlling the at least one submersible craft.

16. The method of claim 15 wherein the beacons comprising light receiving elements positioned so that each beacon can receive light from a plurality of directions, including the steps of :

- a. converting an electrical data signal into a light signal,
- b. transmitting the light signal in a plurality of directions from the at least one submersible craft to at least one of the beacons, and
- c. converting the light signal back to an electrical data signal.

17. The method of claim 15 comprising, before step a., the steps of receiving a radio frequency signal from a control station and converting the radio frequency signal to an electrical data signal.

18. The method of claim 16 comprising, before step a., the steps of converting the electrical data signal to a radio frequency signal and transmitting the radio frequency signal to a control station.

19. The method of claim 16, wherein light signals are emitted by the light beacons at a first frequency and light signals are emitted by the at least one submersible craft at a second frequency that does not interfere with communications at the first frequency.

20. The method of claim 15, wherein a plurality of submersible crafts each comprises a unique address for receiving data.